



HYGIENETECH

Hygiene Technologies International, Inc.

3625 Del Amo Boulevard, Suite 180
Torrance, California 90503-1643
(310) 370-8370
(310) 370-7026 FAX
www.hygienetech.com

October 18, 2010

State of California
Board of Equalization
450 N Street
Sacramento, California 94279

Document No. 21009001.3

Attention: David Gau

Regarding: Limited Fungal Growth Exposure Assessment Surveys
Day Care

Dear Mr. Gau:

On August 18 and September 29, 2010, industrial hygienists with Hygiene Technologies International, Inc. (HygieneTech) conducted limited fungal growth exposure assessment surveys involving the Day Care facility located within the California State Board of Equalization (BOE) building. Prior to the surveys, suspect fungal growth was identified by HygieneTech within the Day Care wall cavities that separate the cafeteria area (hallway, restroom, locker, and seating areas) western partition walls from the Day Care Kitchen and Day Care Preschool Room. The suspect fungal growth identified was observed from the cafeteria side during the August through October, 2010 weekend abatement activities that had occurred in those areas. The survey findings, along with the analytical data, conclusions, and recommendations appear below.

On the survey dates, air samples were collected for total (viable and nonviable) fungi analyses using a Zefon brand Bio-Pump™ equipped with Air-O-Cell™ cassettes. All such samples were subsequently analyzed for fungi (including yeasts, molds, rusts, smuts, and mushrooms) by trained and experienced microbiologists at a laboratory accredited by the American Industrial Hygiene Association (AIHA) and that successfully participates in the AIHA Environmental Microbiology Proficiency Analytical Testing (EMPAT) Program. The airborne fungi assessment analytical data with supporting and background information appear in the enclosed table.

As presented in Table 21009001-21, the airborne spore count data recorded on the sample dates showed mostly common fungal spore types outdoors such as *Alternaria*, ascospores, basidiospores, *Botrytis*, *Chaetomium*, *Cladosporium*, colorless spores typical of *Penicillium* and *Aspergillus* species, *Nigrospora*, *Oidium*, other brown, rusts, smuts, and/or *Stachybotrys*, with *Cladosporium* predominating. In the Day Care areas tested, the data showed low airborne concentrations of common fungal spores that included one or more of the following: *Cladosporium*, other brown, rusts, and/or smuts. The distribution of fungal spore types detected in the surveyed areas was consistent with those found outdoors, and the overall data within the tested areas were well below the overall data recorded outdoors. These data are considered unremarkable and are not believed to pose a health risk beyond that posed by the outdoor environment where exposures to airborne fungi are expected.

Los Angeles • San Francisco • Sacramento • Fresno • Bakersfield • Ontario • San Diego
Seattle • Chicago • Cleveland • New Orleans • Norfolk • New York
Brussels • Vienna • Abuja • Mumbai • Beijing



Be advised that the data provided in this report only represent limited fungal growth exposure potentials that existed at the time the surveys were performed and at the precise sample locations indicated, the latter of which were selected based on the available background information provided. Note that fungal growth and exposure potentials may change due to changes in environmental conditions (such as those caused by water intrusion), use of mechanical systems, or other factors. Also be advised that additional fungal growth may exist at one or more locations in the structure that were not specifically assessed during the surveys.

If you have any comments or questions regarding the information contained in this correspondence, please feel free to contact our offices directly at (310) 370-8370.

Sincerely,

HYGIENE TECHNOLOGIES INTERNATIONAL, INC.

Kenny K. Hsi, CIH
Technical Director

HYGIENE TECHNOLOGIES INTERNATIONAL, INC.

APPENDIX A



**CLIENT: State of California
Board of Equalization
405 N Street
Sacramento, California 94279**

**TABLE 21090001-21
AIRBORNE TOTAL FUNGI RESULTS
1ST FLOOR DAY CARE
SACRAMENTO, CALIFORNIA
AUGUST AND SEPTEMBER, 2010**

Page 1

Results reported in spores per cubic meter of air (spores/M³)

| SAMPLE NUMBER | 21008001-15 TM01OUTLS | 21008001-15 TM02LS | 21009001-21 TM01OUTWF | 21009001-21 TM02WF |
|---------------------------------|--|--|---|--|
| SAMPLING LOCATION/ACTIVITIES | Outdoors; about 10 feet north of hallway; approximately five feet above ground/Normal outdoor activities | Day Care; Kitchen; about center; approximately five feet above floor/Sampling activities only | Outdoors; N Street sidewalk between 4 th and 5 th Streets; about five feet above ground/Normal outdoor activities | Day Care; Kitchen; about center; approximately five feet above floor/Sampling activities only |
| DATE | 8-18-10 | 8-18-10 | 9-29-10 | 9-29-10 |
| START/STOP | 18:31:00/18:36:00 | 18:38:00/18:43:00 | 17:54:00/17:59:00 | 18:04:00/18:09:00 |
| SAMPLE TIME | 5 minutes | 5 minutes | 5 minutes | 5 minutes |
| Alternaria | 110 | | 67 | |
| Arthrinium | | | | |
| Ascospores | 53 | | 27 | |
| Aureobasidium | | | | |
| Basidiospores | 1,300 | | 290 | |
| Bipolaris/Drechslera group | | | | |
| Botrytis | 13 | | | |
| Chaetomium | 13 | | 93 | |
| Cladosporium | 5,600 | | 3,400 | 53 |
| Curvularia | | | | |
| Fusarium | | | | |
| Myrothecium | | | | |
| Nigrospora | | | 160 | |
| Oidium | 13 | | 27 | |
| Other brown | | | 13 | 40 |
| Other colorless | | | | |
| Penicillium/Aspergillus types | 320 | | 210 | |
| Pithomyces | | | | |
| Rusts | 67 | | 27 | |
| Smuts (Periconia, Myxomycetes) | 13 | | 210 | 13 |
| Stachybotrys | | | 13 | |
| Stemphylium | | | | |
| Torula | 27 | | 53 | |
| Ulocladium | | | | |
| Hyphal Fragments | 80 | <13 | 130 | <13 |
| Background Particulate* | 3+ | 1+ | 4+ | 2+ |
| TOTAL** | 7,500 | <13 | 4,600 | 110 |

*Background Particulate is an indication of the amount of non-biological particulate matter present on the slide and is graded (from least to greatest) as 1+ to 4+.

**Note that all reported counts have been rounded to no more than two significant figures based on the sampling and analytical methods used, and therefore the total count may not equal the sum of the individual counts in a column.

HYGIENE TECHNOLOGIES INTERNATIONAL, INC.

APPENDIX A



CLIENT: State of California
Board of Equalization
405 N Street
Sacramento, California 94279

TABLE 21090001-21
AIRBORNE TOTAL FUNGI RESULTS
1ST FLOOR DAY CARE
SACRAMENTO, CALIFORNIA
AUGUST AND SEPTEMBER, 2010

Page 2

Results reported in spores per cubic meter of air (spores/M³)

| SAMPLE NUMBER | 21009001-21 TM03WF | | | |
|---------------------------------|---|---|---|---|
| SAMPLING LOCATION/ACTIVITIES | Day Care; Preschool Room; southeastern corner; about five feet north of sinks; approximately five feet above floor/Sampling activities only | This column intentionally left blank | This column intentionally left blank | This column intentionally left blank |
| DATE | 9-29-10 | | | |
| START/STOP | 18:11:00/18:16:00 | | | |
| SAMPLE TIME | 5 minutes | | | |
| Alternaria | | | | |
| Arthrini | | | | |
| Ascospores | | | | |
| Aureobasidium | | | | |
| Basidiospores | | | | |
| Bipolaris/Drechslera group | | | | |
| Botrytis | | | | |
| Chaetomium | | | | |
| Cladosporium | | | | |
| Curvularia | | | | |
| Fusarium | | | | |
| Myrothecium | | | | |
| Nigrospora | | | | |
| Other brown | | | | |
| Other colorless | | | | |
| Penicillium/Aspergillus types | | | | |
| Pithomyces | | | | |
| Rusts | 13 | | | |
| Smuts (Periconia, Myxomycetes) | | | | |
| Stachybotrys | | | | |
| Stemphylium | | | | |
| Torula | | | | |
| Ulocladium | | | | |
| Hyphal fragments | <13 | | | |
| Background Particulate* | 2+ | | | |
| TOTAL** | 13 | | | |

*Background Particulate is an indication of the amount of non-biological particulate matter present on the slide and is graded (from least to greatest) as 1+ to 4+.

**Note that all reported counts have been rounded to no more than two significant figures based on the sampling and analytical methods used, and therefore the total count may not equal the sum of the individual counts in a column.



EMLab P&K

Report for:

Mr. Wesley Frey, Mr. Larry Sandhu
Hygiene Technologies International, Inc.: Northern California
3625 Del Amo Boulevard, Suite 180
Torrance, CA 90503-8370

Regarding: Project: 21008001-15
EML ID: 693153

Approved by:

Lab Manager
Malcolm Moody

Dates of Analysis:
Spore trap analysis: 08-19-2010

Service SOPs: Spore trap analysis (1038)

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Document Number: 200091 - Revision Number: 5

Client: Hygiene Technologies International, Inc.:
Northern California
C/O: Mr. Wesley Frey, Mr. Larry Sandhu
Re: 21008001-15

Date of Sampling: 08-18-2010
Date of Receipt: 08-19-2010
Date of Report: 08-20-2010

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

| | | | | |
|---------------------------------|-----------------------|--------------|--------------------|----------------|
| Location: | 21008001-15-TM01OUTLS | | 21008001-15-TM02LS | |
| Comments (see below) | None | | A | |
| Lab ID-Version‡: | 3073030-1 | | 3073031-1 | |
| | raw ct. | spores/m3 | raw ct. | spores/m3 |
| Alternaria | 8 | 110 | | |
| Arthrinium | | | | |
| Ascospores* | 1 | 53 | | |
| Aureobasidium | | | | |
| Basidiospores* | 24 | 1,300 | | |
| Bipolaris/Drechslera group | | | | |
| Botrytis | 1 | 13 | | |
| Chaetomium | 1 | 13 | | |
| Cladosporium | 105 | 5,600 | | |
| Curvularia | | | | |
| Epicoccum | | | | |
| Fusarium | | | | |
| Myrothecium | | | | |
| Nigrospora | | | | |
| Oidium | 1 | 13 | | |
| Penicillium/Aspergillus types† | 6 | 320 | | |
| Pithomyces | | | | |
| Rusts* | 5 | 67 | | |
| Smuts*, Periconia, Myxomycetes* | 1 | 13 | | |
| Stachybotrys | | | | |
| Stemphylium | | | | |
| Torula | 2 | 27 | | |
| Ulocladium | | | | |
| Background debris (1-4+)†† | 3+ | | 1+ | |
| Hyphal fragments/m3 | 80 | | < 13 | |
| Pollen/m3 | 53 | | < 13 | |
| Skin cells (1-4+) | < 1+ | | < 1+ | |
| Sample volume (liters) | 75 | | 75 | |
| § TOTAL SPORES/m3 | | 7,500 | | < 13 |

Comments: A) No spores detected.

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample.

* Most of these spore types are not seen with culturable methods (Andersen sampling), although some may appear as non-sporulating fungi.

Most of the basidiospores are "mushroom" spores while the rusts and smuts are plant pathogens.

† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

†† Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for sample volumes when evaluating dust levels.

The Limit of Detection is the product of a raw count of 1 and 100 divided by the percent read. The analytical sensitivity (counts/m3) is the product of the Limit of Detection and 1000 divided by the sample volume.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

Date of Sampling: 08-18-2010
Date of Receipt: 08-19-2010
Date of Report: 08-20-2010

Outdoor Sample: 21008001-15-TM01OUTLS

| Fungi Identified | Outdoor sample spores/m3 | | | | Raw count | Spores/m3 |
|--|--------------------------|----|-----|-------|-----------|--------------|
| | <100 | 1K | 10K | >100K | | |
| Generally able to grow indoors* | | | | | | |
| Alternaria | <div><div></div></div> | | | | 8 | 110 |
| Bipolaris/Drechslera group | | | | | ND | < 13 |
| Chaetomium | <div><div></div></div> | | | | 1 | 13 |
| Cladosporium | <div><div></div></div> | | | | 105 | 5,600 |
| Curvularia | | | | | ND | < 13 |
| Nigrospora | | | | | ND | < 13 |
| Penicillium/Aspergillus types† | <div><div></div></div> | | | | 6 | 320 |
| Stachybotrys | | | | | ND | < 13 |
| Torula | <div><div></div></div> | | | | 2 | 27 |
| Seldom found growing indoors** | | | | | | |
| Ascospores†† | <div><div></div></div> | | | | 1 | 53 |
| Basidiospores†† | <div><div></div></div> | | | | 24 | 1,300 |
| Botrytis | <div><div></div></div> | | | | 1 | 13 |
| Oidium | <div><div></div></div> | | | | 1 | 13 |
| Rusts | <div><div></div></div> | | | | 5 | 67 |
| Smuts, Periconia, Myxomycetes†† | <div><div></div></div> | | | | 1 | 13 |
| Total | | | | | | 7,507 |

| Fungi Identified | Indoor sample spores/m3 | | | | Raw count | Spores/m3 |
|--|-------------------------|----|-----|-------|-----------|------------|
| | <100 | 1K | 10K | >100K | | |
| Generally able to grow indoors* | | | | | | |
| Alternaria | | | | | ND | < 13 |
| Bipolaris/Drechslera group | | | | | ND | < 13 |
| Chaetomium | | | | | ND | < 13 |
| Cladosporium | | | | | ND | < 13 |
| Curvularia | | | | | ND | < 13 |
| Nigrospora | | | | | ND | < 13 |
| Penicillium/Aspergillus types† | | | | | ND | < 13 |
| Stachybotrys | | | | | ND | < 13 |
| Torula | | | | | ND | < 13 |
| Seldom found growing indoors** | | | | | | |
| Ascospores†† | | | | | ND | < 13 |
| Basidiospores†† | | | | | ND | < 13 |
| Rusts | | | | | ND | < 13 |
| Smuts, Periconia, Myxomycetes†† | | | | | ND | < 13 |
| Total | | | | | | N/A |

[illegible]

Client: Hygiene Technologies International, Inc.:
Northern California
C/O: Mr. Wesley Frey, Mr. Larry Sandhu
Re: 21008001-15

Date of Sampling: 08-18-2010
Date of Receipt: 08-19-2010
Date of Report: 08-20-2010

MoldSCORE™: Spore Trap Report

*The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

**These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

†The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods.

††Most of these spore types are not seen with culturable methods (Anderson sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores.

‡Rated on a scale from 100 to 300. A rating less than 150 is low and indicates a low probability of spores originating inside. A rating greater than 250 is high and indicates a high probability that the spores originated from inside, presumably from indoor mold growth. A rating between 150 and 250 indicates a moderate likelihood of indoor fungal growth. MoldSCORE is NOT intended for wall cavity samples. It is intended for ambient air samples in residences. Using the analysis on other samples (like wall cavity samples) will lead to misleading results.



3825 Del Amo Boulevard, Suite 180
Torrance, California 90503-1843
(310) 370-8370
(310) 370-2474 FAX
www.hvgiengerter.com

Request For Analysis

LOS ANGELES • SACRAMENTO • ONTARIO • SAN DIEGO • FRESNO • NORFOLK • TORONTO • BEIJING



EMLab P&K

Report for:

Mr. Wesley Frey, Mr. Larry Sandhu
Hygiene Technologies International, Inc.: Northern California
3625 Del Amo Boulevard, Suite 180
Torrance, CA 90503-8370

Regarding: Project: 21009001-21
EML ID: 709796

Approved by:

Lab Manager
Malcolm Moody

Dates of Analysis:
Spore trap analysis: 10-04-2010

Service SOPs: Spore trap analysis (1038)

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Document Number: 200091 - Revision Number: 5

Client: Hygiene Technologies International, Inc.:
Northern California
C/O: Mr. Wesley Frey, Mr. Larry Sandhu
Re: 21009001-21

Date of Sampling: 09-29-2010
Date of Receipt: 10-01-2010
Date of Report: 10-04-2010

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

| | | | | | | |
|--|----------------------|--------------|-------------------|------------|-------------------|-----------|
| Location: | 21009001-21TM01OutWF | | 21009001-21TM02WF | | 21009001-21TM03WF | |
| Comments (see below) | None | | None | | None | |
| Lab ID-Version‡: | 3145943-1 | | 3145944-1 | | 3145945-1 | |
| | raw ct. | spores/m3 | raw ct. | spores/m3 | raw ct. | spores/m3 |
| <i>Alternaria</i> | 5 | 67 | | | | |
| <i>Arthrinium</i> | | | | | | |
| <i>Ascospores*</i> | 2 | 27 | | | | |
| <i>Aureobasidium</i> | | | | | | |
| <i>Basidiospores*</i> | 16 | 290 | | | | |
| <i>Bipolaris/Drechslera</i> group | | | | | | |
| <i>Botrytis</i> | | | | | | |
| <i>Chaetomium</i> | 7 | 93 | | | | |
| <i>Cladosporium</i> | 63 | 3,400 | 1 | 53 | | |
| <i>Curvularia</i> | | | | | | |
| <i>Epicoccum</i> | | | | | | |
| <i>Fusarium</i> | | | | | | |
| <i>Nigrospora</i> | 12 | 160 | | | | |
| <i>Oidium</i> | 2 | 27 | | | | |
| Other brown | 1 | 13 | 3 | 40 | | |
| <i>Penicillium/Aspergillus</i> types† | 4 | 210 | | | | |
| <i>Pithomyces</i> | | | | | | |
| <i>Rusts*</i> | 2 | 27 | | | 1 | 13 |
| <i>Smuts*, Periconia, Myxomycetes*</i> | 16 | 210 | 1 | 13 | | |
| <i>Stachybotrys</i> | 1 | 13 | | | | |
| <i>Stemphylium</i> | | | | | | |
| <i>Torula</i> | 4 | 53 | | | | |
| <i>Ulocladium</i> | | | | | | |
| Background debris (1-4+)†† | 4+ | | 2+ | | 2+ | |
| Hyphal fragments/m3 | 130 | | < 13 | | < 13 | |
| Pollen/m3 | 150 | | 13 | | 13 | |
| Skin cells (1-4+) | < 1+ | | 1+ | | 1+ | |
| Sample volume (liters) | 75 | | 75 | | 75 | |
| § TOTAL SPORES/m3 | | 4,600 | | 110 | | 13 |

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample.

* Most of these spore types are not seen with culturable methods (Andersen sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores while the rusts and smuts are plant pathogens.

† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

†† Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for sample volumes when evaluating dust levels.

The Limit of Detection is the product of a raw count of 1 and 100 divided by the percent read. The analytical sensitivity (counts/m3) is the product of the Limit of Detection and 1000 divided by the sample volume.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.



3625 Del Amo Boulevard, Suite 180
Torrance, California 90503-1843
(310) 370-8370
(310) 370-2474 FAX
www.hygienetech.com

Request For Analysis

LOS ANGELES • SACRAMENTO • ONTARIO • SAN DIEGO • FRESNO • NORFOLK • TORONTO • BEIJING